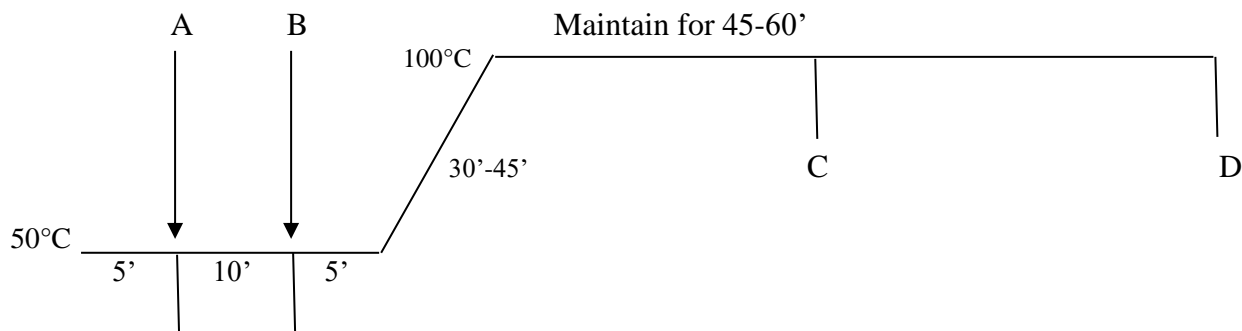




ACID DYES

ACID DYES: SOLIDO ACIDO/ FOLLONE / M/ GAMMASET/ K

SOLIDO ACIDO DYES: these dyes own great levelling properties. Coverage of barre is very good. Furthermore, they are suitable for trichromatic combination shades. This class of dyes is especially good for carpet and sportswear coloration. They can be applied both on polyamide and wool.



DYEING METHOD:

Set bath at 50°C and run with goods for 5'.

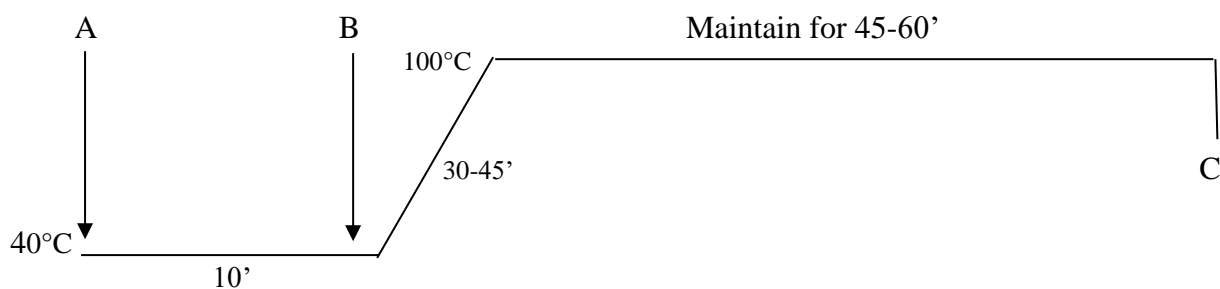
A: 5% sodium sulphate, 2-3% acetic acid 80% (or 4% sulphuric acid 96% in case of brilliant solido acido dyes), levelling agent;

B: add dissolved dye;

C: check exhaustion and, if necessary, add 2% of formic acid or 2% sulphuric acid;

D: Release dyebath and thoroughly rinse with warm and cold water

FOLLONE DYES: this kind of acid dyes have good wet fastness. Especially they are used for dark shades giving best results as self shades or in limited combinations.



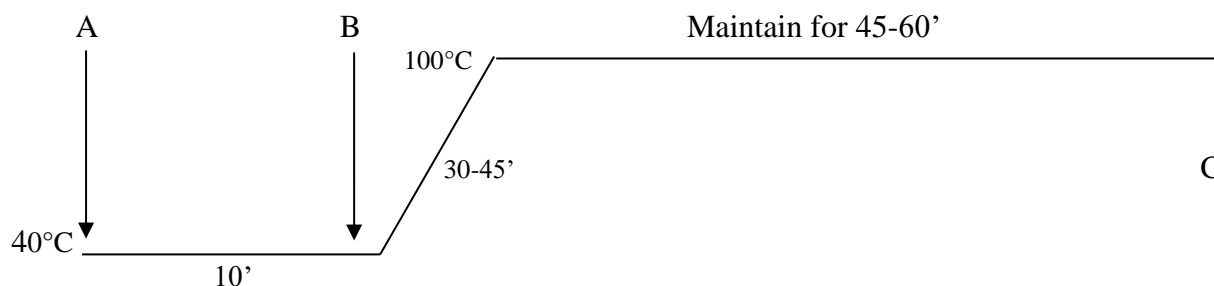
DYEING METHOD:

A: set bath at 40°C with 1-2% levelling agent, 3-4g/l ammonium sulphate;

B: add dye solution, raise to boiling temperature in 30-45' maintaining for 40-60'(for high % of dye, add acetic acid to complete exhaustion).

C: Release dyebath and thoroughly rinse with warm and cold water..

M DYES: These acid dyes are 1:2 metal complex dyes. Main features: good levelling properties; good wet fastness; exceptional light fastness; great compatibility. Suitable for reproducing pale shades in automotive field



DYEING METHOD:

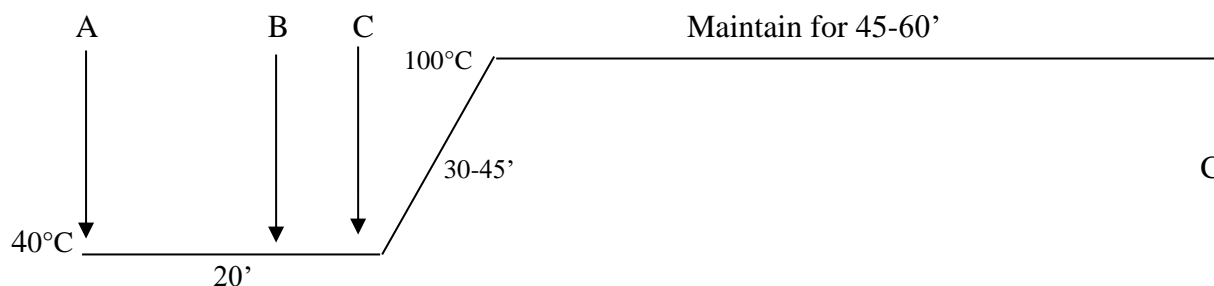
A: set bath at 50°C with 2g/l sodium acetate, pH 5 with Acetic acid, levelling agent.

B: add dye solution, raise to boiling temperature in 30-45' maintaining for 40-60'(for high % of dye, add acetic acid to complete exhaustion).

C: Release dyebath and thoroughly rinse with warm and cold water.

GAMMASET DYES: easy and cost-effective application; high overall fastness with no aftertreatment; good reproducibility. Good levelling and migration properties. Suitable for nylon, silk and wool. They can be applied on loose fibers, sliver tops in package form, yarn hank, yarn package, fabric.

Recommended application: men's and women's outerwear, swimwear



DYEING METHOD:

A: set bath at 40°C with levelling agent.

B: set the pH bath at 4-5, run for 10'.

C: add dye solution, and run again for 10'; raise to boiling temperature in 30-45' maintaining for 40-60'.

D: cool, release dye bath and rinse

K DYES: it's a special selection of acid dyes, with exceptional fastness to severe water. They follow SOLIDO ACIDO DYES dyeing method.

CLASSIFICATION CLASS (LEGEND):A=SOLIDO ACIDO / FOLLONE; M =Metal complex; GS=GAMMASET; K= K dyes

Dischargeability: with zinc-formaldehyde solfoxilate (5=totally dischargeable);pool water ISO105E03(20ppm): fading; light fastness ISO 105 B02 (xenotest, blue scale up to 8) if 3 values reported :2/1, 1/1, 1/12 of the shade; if 2 values reported: 1/1, 1/10 of the shade. Washing, severe water, perspiration and sea water fastnesses :if 1 value reported, : staining on PA; if 3 values reported: change in shade/ staining on PA / staining on cotton rubbing, ISO 105 X 12 upper value= dry; lower value= wet.

Alkaline perspiration: if 3 values reported, from the top down: change in shade, staining on PA, staining on rayon; if 1 value reported : staining on PA.

gammaset (GS) pool water ISO105E03 : 50 ppm change in shade

gammaset (GS) light fastness ISO 105 B02 (xenotest, blue scale up to grade 8); from the top down 1/3 and 1/1 of the shade (nero B aside, see)

Notes: for each dye there are two values of dyeing percentages. The one at the top is a reference for the indicated fastness values, the one at the bottom refers to the attached dyed fabric.

N.b: the reported values are indicative and do not constitute a guarantee.

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	GIALLO 8GX	A	184	50	3-4 3 2-3	4 4-5 5	4-5 3-4 3-4
			4-5 3-4 3-4	4-5 3-4 4	4-5 3-4 4		3	
	1	GIALLO GWG	A	61	90	6 5-6 5	4 4-5 4-5	4-5 4-5 4
			4 4 3-4	4-5 4 4-5	4-5 4 4-5			
	1	GIALLO EGL	A	49	60	6-7 6 5-6	4 4 4-5	4-5 3 4
			4 2-3 3-4	4 3 4	4 3-4 4-5		5	
	1	GIALLO R	A	42	40	7 5-6 6	4-5 4-5 4-5	4-5 4 4-5
			4-5 4 3-4	4-5 4 4-5	4-5 4 4-5		5	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	FLAVINA M7G	A	250	100	3 4	4-5 4-5 4-5	4 4 3-4
			4-5 3-4 3-4	4-5 3 3-4		4	3	
	1	GIALLO S-2G	A	220	75	7-8	4	
				4-5	4-5			
	1	GIALLO FLW	A	110		5-6 5 4-5	4-5 4-5 4-5	
			4-5 4-5 5	5 5 5			4-5 4-5 5	
	1	ROSA MFR 300%	A	418	18	7-8 7 5	4-5	4-5
			4-5	4-5	4-5	5	Neutro 2 Acido 3	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	GIALLO 4GL	A	79	100	6 5-6 5-6	4 4-5 4-5	4-5 4 4-5
			4 4 4	5 4-5 5	4-5 4-5 4-5	3	4	
	1	GIALLO 4R 200%	A	219	100	7 6-7 6-7	4-5 4 3-4	5 4 4
			5 2-3 3	4-5 3-4 3-4	4-5 4-5 3-4		3	
	1	GIALLO F3RL	A	67 ORANGE	80	6 6 5	4 4 4-5	4 4 3-4
			4 3-4 3-4	4-5 4 4	4-5 4 4		3	
	1	GIALLO M3RL	M	194	50	6-7 6 5-6	4-5 4-5 5	4-5 4-5 4-5
			4-5 4 4	4-5 3-4 4-5	4-5 4 4-5		2	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	GIALLO K-2GL	K	59				
			4/5	4/5				
	1	GIALLO M2GLN	M	241	40	6 5-6 5	4-5 4-5 4-5	
				4-5 4 4-5				
	1	ARANCIO S-2R	A	144	100	5-6	5	
				4-5	5			
	1	ARANCIO M RL	M	142		7 6-7 5-6	5 4-5 4-5	
				4 4 4			4 4 4	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ARANCIO FSL	A	116	60	5-6 5 4-5	4 4 4-5	5 4-5 5
			4-5 4-5 4-5	4-5 4-5 4-5	4-5 4-5 4-5	4-5 4-5 4-5	4-5 4-5 4-5	
		ARANCIO EGN	A	33		4-5	3-4	3
			3		4			
	1	SCARLATTO FG	A	374	25	5 4-5 4	4-5 4 4	4-5 5 5
			4 4-5 4-5	5 5 5	4-5 4-5 5	4 4-5 4-5	5 5 5	
	1	ROSSO 2BS	A	266	50	6-7 6 5-6	4 3-4 3-4	4 3-4 4
			4 3 3-4	4-5 3-4 4	4 4 4	4 3 3-4	4-5 3-4 4	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ROSSO GWG	A	118	70	6 5-6 5	4 3-4 3-4	4-5 3-4 4
			4-5 3 4	4 3 4-5	4 3 4-5	4-5 3 4	4 3 4-5	
	1	ROSSO 3GW	A	57	90	6 5 4	3 3-4 3-4	3-4 2-3 3-4
			3-4 2-3 3-4	4 3 4	4 3-4 4	3-4 2-3 3-4	4 3 4	
	1	ROSSO FGRS	A	mix	30	5-6 5 4-5	4-5 4-5 4-5	4-5 4 4
			4-5 3-4 3	4-5 4-5 4-5	4-5 3-4 3	4-5 4-5 4-5	4-5 3-4 3	
	1	ROSSO 3B	A	131	60	4-5 4 3-4	3-4 4 4	4 4 4
			4 4 4	4-5 4-5 4-5	4-5 4-5 4-5	4 4 4	4-5 4-5 4-5	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ROSSO N-RB	A	Mix	50	5 4-5 4	4-5 4 4	4-5 4 4
			4-5 4 4	4 3 4-5	4-5 4 4	4 3 4-5	4-5 4 4	
	1	ROSSO FBW	A	138	30	5-6	4 4 4	4 4 3
			4 4 3	4-5 4 3		4 4 3	4-5 4 3	
	1	ROSSO MBR	A	362	50	3-4 5	4-5 4-5 4-5	4-5 4-5 4
			4-5 4-5 4-5	4-5 4-5 5			3	
	1	ROSSO BB	A	249		5-6 5 4	2 3 4-5	4-5 4-5 4-5
			4 4 4	4-5 4-5 5	4 4-5 4-5	4 4 4	4-5 4-5 5	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ROSSO BR	A	151	50	6 5 4	4-5 4-5 4-5	
			4-5 4-5 5		4-5 4-5 5	5	4-5 4-5 5	
	1	ROSSO 4G 200%	A	337	60	7 6 6	3-4 2 3-4	4 3 4
			4-5 2 3-4		3-4 2-3 3	4-5	4-5 2 3-4	
	1	ROSSO CBL	A	260	50	7 6-7 6	4 2-3 4	5 3-4 4
			5 4-5 5	4 2-3 3-4	5 3-4 4	5 4-5 5	4 2-3 3-4	
	1	ROSSO AB (EXB)	A	52	60	2-3 2 1-2	2 4 4	4 4 3-4
			1 3 4	4 3 4		1 3 4	4 3 4	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
		ROSSO SGS		mix				
	1	ROSSO SGN	A	359	30	6-7	5	
			5	5		5	5	
	1	ROSSO POLARE 10B 140%	A	A.V. 54	--	4-5	5	5
			5	5	5	--	--	S (5) U (4-5)
	1,4	ROSSO N-ABF (A2BF)	A		100	5	4	4-5
	0,5		4	4				

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ROSSO 2B	A	361	90	6 5 4-5	4-5 4 4-5	4-5 4-5 4-5
			5 4-5 4-5	5 4-5 4-5	5 4-5 4-5	5 4-5 4-5	5 4-5 4-5	
	1	ROSSO S-BB	A	315	100	5-6	4-5	
			4-5	4		4-5	4	S=5 U=5
	1	ROSSO 2GF	A	154		5-6	4-5	
			3-4		3-4		3-4	
	1	ROSSO S-RL	A	414	80		5 5 5	
			5 5 5	5 5 5			3	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	ROSSO E-BNL				6-7	3-4	3-4
			3	3-4	3-4	Change shade 3-4	--	S 5 U 5
	1	ROSSO N-2RBL		336	80	6-7	4	4-5
			4	4-5	4-5	3-4	5	D(5) W(5)
	1	RUBINO 5BT	A	299	40	6 5 4-5	3-4 3-4 4	4 4 4
			4 3 3-4	4-5 3-4 4	4-5 4 4		5	
	1	BORDO SB	A	405	80		4-5 5 5	
			4-5 4-5 4-5	4-5 4 4-5		4-5 4-5 4-5	4-5 4 4-5	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	BRUNO MBL	M	355	50	6-7 6 5-6	4-5 4-5 5	4-5 4-5 4-5
			4-5 4-5 4-5	4-5 4-5 4-5	4-5 4 4-5		4-5 4-5 4-5	
	1	OLIVA M BGL	M	104	60	7 6-7 6	4-5 4-5 4-5	
				4-5 4 4-5				
	1	OLIVA GLS	M	73	60	7-8 7 6	4-5 4-5 4-5	4-5 4 4-5
			4-5 4 4-5	4-5 4 4-5		4-5 4 4-5	4-5 4 4-5	
	1	VERDE G	A	25	30	6-7 6 5-6	4 4-5 4	4 3-4 4
			4 3 3-4	4-5 4 4	4 4 4	4 3 3-4	4-5 4 4	

ACID DYES	%	NAME	CLASS	Cl	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	BLU G	A	40	40	7 6-7 6	4 3-4 4	4 3-4 4
			4 3 3-4	3 3-4 4	4 3-4 4	4 3 3-4	3 3-4 4	
	1	BLU A	A	25	20	6 5-6 5	3-4 3 4	4 3 4
			4 2 3-4	4 3 3-4	4 3 3-4			
	1	BLU GWG	A	82	70	6 5-6 5-6	4 3-4 3-4	4-5 3-4 3-4
			4-5 3 3-4	4 2-3 4-5	4 3 4			
	2	BLU ROYAL DR NEW	A	MIX	40	6	4 3-4 4-5	4-5 4-5 4-5
			4 3-4 4	4 3-4 4-5		2-3	4 3-4 4	

ACID DYES	%	NAME	CLASS	Cl	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
		BLU NBLN 200%						
	8	BLU MAR. MTR LIQ.	M	193	-	5-6 5-6 5	4-5 5 5	4-5 4-5 4-5
			4-5 4-5 4-5	4-5 4-5 4-5	4-5 4-5 4-5		4-5 4-5 4-5	
	1	BLU (MARINO) MRBL	M	342				
	1	BLU VCL corrodibile	A	26		4 5	2-3 4-5 3	2-3 1-2 3
			3 4-5 4	3 4 4			3 4-5 4	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	2	GRIGIO K-BL	K	60	30	5 6	4-5 4-5 4-5	4-5 4-5 4-5
			4-5 4-5 4-5	4-5 4-5 4-5		4-5 4-5 4-5	4-5 4-5 4-5	
	10	NERO MSRL LIQ.	M	194	-	6=1/1 7=2/1	4-5 4-5 4-5	4-5 4-5 4
			4-5 4 4	4-5 4-5 4-5	4-5 4 4-5	4-5 4 4	4-5 4-5 4-5	
	3	NERO SR	M	194	70	6=1/1 7=2/1	4-5 4-5 4-5	4-5 4-5 4
			4-5 4 4	4-5 4-5 4-5	4-5 4 4-5	4-5 4 4	4-5 4-5 4-5	
	3	NERO BG	M	107	15	6-7=1/1 7=2/1	4-5 4 4-5	4-5 4 4-5
			4-5 4 4-5	4-5 4 4-5	4-5 4 4		4-5 4 4-5	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	3	NERO BS	A	MIX	50	6-7=1/1 7=2/1	3-4 4-5 2-3	4 3-4 3-4
			4 4 3-4	4 4-5 3-4		4 4 3-4	4 4-5 3-4	
	3	NERO WA	A	52				
	3	NERO MBE	M	63				
	3	NERO 2B	A	24	30	6=1/1 6=1/1	4 4 3-4	4-5 3-4 4
				4 3 3-4	4-5 4 4-5	4 4 4-5	4 3 3-4	4-5 4 4-5

Gammaset	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	GIALLO 2R	GS		70	5-6 6-7	4-5 4-5 4-5	5 4-5 4-5
			4-5 4-5 4-5	4-5 4-5 4-5		4-5 4-5 4-5	4-5 4-5 4-5	S=U 5
	1	BORDEAUX B	GS	MIX	80	6 5 4-5	4-5 4-5 5	4-5 4-5 4-5
			4-5 4-5 4-5	4-5 5 5	4-5 4-5 4-5	4 4		5 5
	2	MARINO R	GS		100	5-6	4-5	
			4-5	5		4-5		5 4-5
		VIOLETTO B	GS		80	4-5 5-6	4-5 4-5 5	
			4-5 4 5	4-5 4 5		4	4-5 4-5 5	5 5

Gammaset	%	NAME	CLASS	Cl	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
		NERO B	GS		70	1/1=6 2/1= 6-7	4-5 4 4-5	
			4-5 4 4	4-5 4-5 4-5		4		5 4-5
		ROSSO G	GS		80	5 6	5 5 5	
			5 4-5 5	4-5 5 5		4-5		4-5 4-5
		ROSSO (G.SET) 2B	GS		100	4 4-5	4-5 4-5 5	
			4-5 4 5	4-5 4-5 5		4		5 4-5
		VERDE B	GS		30	5 5-6	4-5 5 4-5	
			4-5 4 3-4	4-5 4-5 4-5		4-5		5 4-5

Gammaset	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	2	GRIGIO EG	GS	MIX	40	5 5-6	4 4-5 4-5	4-5 5 5
			4 4-5 4-5	4-5 4-5 4-5		4 4-5 4-5	4-5 4-5 4-5	5 5
		ARANCIO RN	GS	MIX	30	4-5 5	3 4 4-5	
			4 2-3 2-3			3-4 4		4-5 4-5
		BLU 2R	GS		80	4 4-5	4-5 3-4 4-5	
			4-5 3-4 4	4-5 3-4 5		4		5 5
		BRUNO B	GS		90	5-6 6	4-5 5 5	
			4-5 5 5		90	4		5 5

Gammaset	%	NAME	CLASS	CI	solubility	Xenot	washing 60°C	Acid perspiration
ACID DYES								
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
		GIALLO 4GN	GS		100	5-6 6-7	5 5 5	
			4-5 4-5 5	5 5 5		4		5 4-5
	1	VIOLETTO FBN	A	48	80	6-7 6 5-6	5 5 5	4-5 4-5 4-5
			4-5 4 4-5	5 4-5 5	4-5 4-5 4-5		4-5 4 4-5	
	1	VERDE 6GL	A	28	35	6 5-6 5-6	4 4-5 4-5	4-5 5 5
			4-5 4-5 4-5	4-5 5 5	4-5 5 5	4-5 4-5 4-5	4-5 5 5	
	1	BLU M5G	M	185	50	5-6 5 4-5	4-5 4-5 4-5	4-5 4-5 4-5
			4-5 4-5 4	5 5 4	4-5 4-5 4		4-5 4-5 4	

ACID DYES	%	NAME	CLASS	Cl	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	BLU 2RL (sky blue BR)	A	62	30	7 7 6	3 3-4 4-5	4 3 4
			4 2 3-4	4-5 3 4	4 3-4 4		4 2 3-4	
	1	BLU GLF	A	281	70	6 5-6 5	4 3-4 4-5	4-5 4 4-5
			4-5 4 4	4-5 4-5 4-5	4-5 4 4-5		4-5 4 4	
	1	BLU AR	A	260	100	6 5 4	4 4 4-5	5 4-5 4-5
			5 4-5 4	4-5 4 4-5	4-5 4 4-5	5 4-5 4	4-5 4 4-5	
	1	BLU 5R	A	113	20	6 4-5 4	4 3-4 4	4 3-4 4
			4 3-4 3-4	4 3-4 4	4 3-4 3-4	4 3-4 3-4	4 3-4 4	

ACID DYES	%	NAME	CLASS	CI	solubility	Xenotest	washing 60°C	Acid perspiration
			Alkaline perspiration	water	Sea water	Chlorinated water	Discharge ability	rubbing
	1	BLU MARINO SG 150%	A	317	80	7 6/7	4	4/5
			4/5	4/5				S=5 U=4
	2	MARINO SB 150%	A	284	50	6 4/5	4/5	4/5
			4	4/5				S:4/5 U:3/4
	1	BLU BRL	A	324	60	6 5-6 5-6	4-5 3-4 4-5	5 3-4 5
			4-5 3 4-5	5 3 5	4 3 3-4	4-5 3 4-5	5 3 5	
	1	BLU 4R	A	277	80	5-6 5 4-5	4-5 4 4-5	4-5 4-5 4-5
			5 4-5 4-5	4-5 4-5 4-5	4-5 4-5 4-5	5 4-5 4-5	4-5 4-5 4-5	



GAMMACOLOR

GAMMACOLOR s.r.l.

Dyes e auxiliaries for textile industry

Via Zeuner, 5

20822 – SEVESO (MB), Italy

tel. 0362.550.550 fax 0362.551.915

P.IVA 00736390964 – Cod.Fisc. 02639210158

c.c.i.a. Milano n. 927455

Codice APP/ISS azienda 00736390964

e-mail info@gammacolorsrl.com